

Claims

1. A method for the transmission of a plurality of data packets from a sender (1)
5 to a receiver (2), wherein the data transmission is performed over a link (5)
with a transmission capacity having a limit, and a presentation time is
defined for a first data packet of said plurality, and wherein the receiver (2)
performs a first check whether data packets are correctly received and at
least one data packet is selected for retransmission according to the result of
10 the first check, characterized in that
a delay budget (DB) is determined from the presentation time of the first data
packet,
a delay requirement is determined for the retransmission of the selected
data packet from the limit of the transmission capacity and from the
15 transmission capacity required for the selected data packet,
a comparison (30) of the delay requirement and the delay budget (DB) is
performed,
and the retransmission is executed for the selected data packet according to
the result of the comparison (30).
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2. The method according to claim 1, wherein the receiver stores data packets
in a buffer (BU) with a buffer fill level and wherein the delay budget (DB) is a
function of the buffer fill level.
- 25 3. The method according to claim 1 or 2, wherein the delay budget (DB) is
determined for a group comprising at least two first data packets.
4. The method according to claim 3, wherein the first data packets are
transmitted in a predefined sequence and those data packets are selected
30 for the group, which are the next data packets for transmission in said
sequence, and wherein the selection of data packets for the group is

stopped if the delay budget (DB) remains constant for further selected packets.

- 5 5. The method according to any preceding claim, wherein the receiver (1) requests the selected data packets in a status message.
6. The method according to any preceding claim, wherein the delay budget (DB) is reduced by the delay requirement if a retransmission is performed.
- 10 7. The method according to claim 6, wherein a further comparison of the delay budget with a further delay requirement is performed before a further calculation of the delay budget from the presentation times of the first data packets.
- 15 8. The method according to claim 6 or 7, wherein the delay budget (DB) is adapted if a present rate of the data transmission is lower than the limit of the data transmission capacity.
- 20 9. The method according to any preceding claim, wherein a priority is attributed to a first or selected data packet and wherein the retransmission is executed according to said priority.
- 25 10. The method according to any preceding claim, wherein a presentation time for the selected data packet is compared to an estimated arrival time of the selected data packet at the receiver in a further check (24), and wherein the retransmission of the selected data packet is performed according to the result of the further check (24).
- 30 11. A sender (1) for the transmission of a plurality of data packets to a receiver (2), wherein the sender (1) has a transmission unit adapted to perform the data transmission over a link (5) with a transmission capacity having a limit,

a receiving unit adapted to receive an indication whether data packets are correctly received by the receiver (2), and a processing unit (PS) adapted to define a presentation time for a first data packet of said plurality, and to select at least one data packet for retransmission according to the indication,
5 characterized in that

the processing unit (PS) is adapted to determine a delay budget (DB) from the presentation time of the first data packet,

the processing unit (PS) is adapted to determine a delay requirement for the retransmission of the selected data packet from the limit of the transmission
10 capacity and from the transmission capacity required for the selected data packet,

the processing unit (PS) is adapted to perform a comparison (30) of the delay requirement and the delay budget,

and the processing unit (PS) is adapted to initiate the retransmission for the
15 selected data packet according to the result of the comparison (30).

12. A receiver (2) for the reception of a plurality of data packets from a sender (1), wherein the receiver (2) has a reception unit adapted to receive the data packets over a link (5) with a transmission capacity having a limit, a
20 transmission unit adapted to send an indication whether data packets are correctly received, and a processing unit (PR) adapted to define a presentation time for a first data packet of said plurality and to perform a check, whether data packets are correctly received and to select at least one data packet for the indication according to the result of said check,

25 characterized in that

the processing unit (PR) is adapted to determine a delay budget (DB) from the presentation time of the first data packet,

the processing unit (PR) is adapted to determine a delay requirement for the retransmission of the selected data packet from the limit of the transmission
30 capacity and from the transmission capacity required for the selected data packet,

the processing unit (PR) is adapted to perform a comparison (30) of the delay requirement and the delay budget (DB),
and the processing unit (PR) is adapted to select the data packet for the indication according to the result of the comparison (30).

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13. Program unit comprising code for performing the steps of a method according to any of the claims 1 to 10.